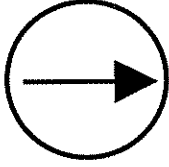


Date : 12/15/98 (7-9AM & 4-6PM)

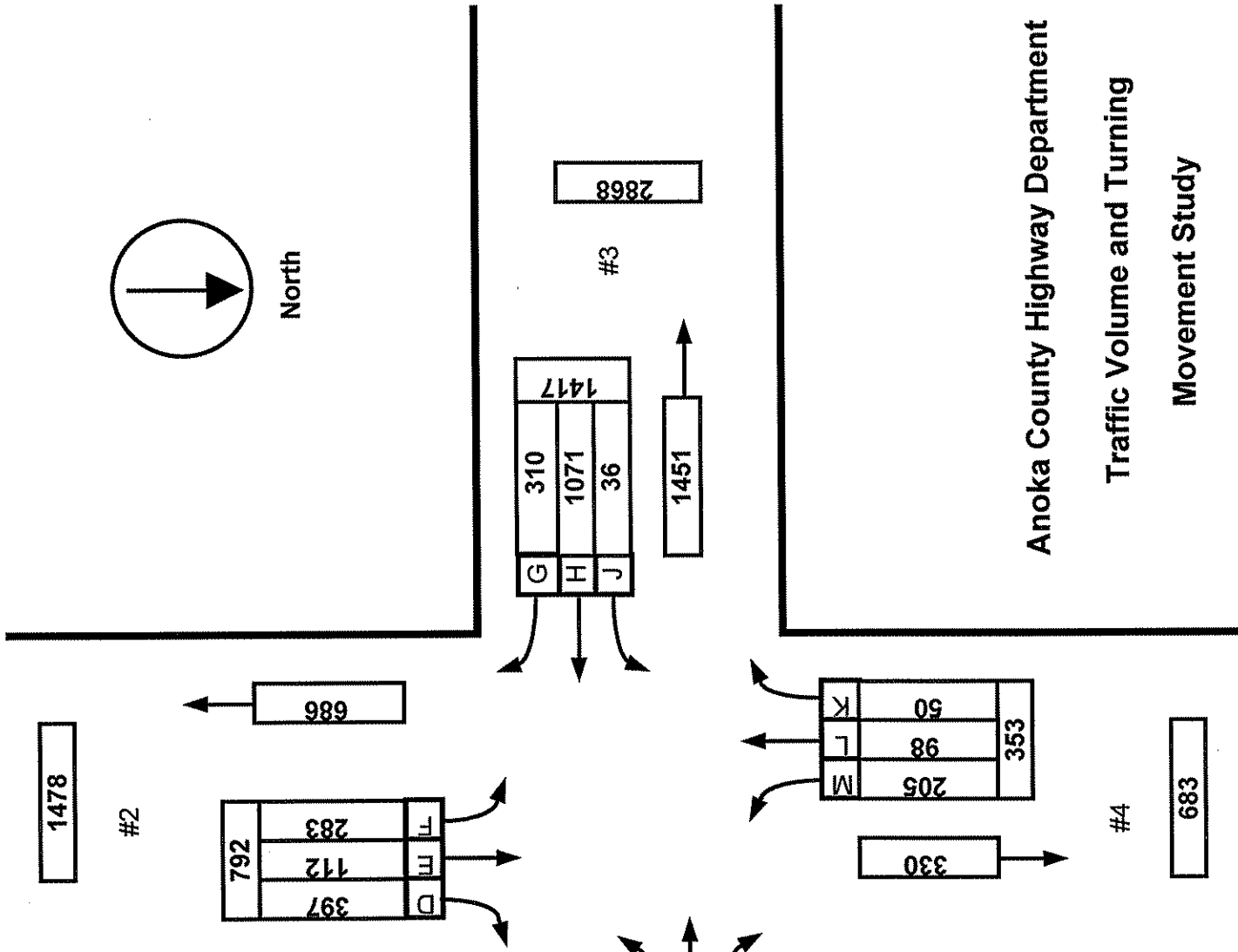
Count Number : TMC9816

Location : CSAH 11 (NORTHDALE BLVD)

@ XEON STREET



North



	LANES OF APPROACH			TOTAL
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	
#1	0	0	1	1
#2	0	0	1	1
#3	0	0	1	1
#4	0	0	1	1

Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study



Anoka County Highway Department  
 Traffic Engineering  
 Traffic Volume and  
 Turning Movement Study

File Name : TMC9816  
 Site Code : 98160102  
 Start Date : 12/15/1998  
 Page : 2

Start Time	XEON STREET										CSAH 11 (NORTHDALE BLVD)										CSAH 11 (NORTHDALE BLVD)									
	Southbound					Westbound					Northbound					Eastbound					Northbound					Eastbound				
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Exclu. Total	Inclu. Total	Int. Total		
Factor	1.0	1.0	1.0	1.0	0	1.0	1.0	1.0	1.0	0	1.0	1.0	1.0	1.0	0	1.0	1.0	1.0	1.0	0	1.0	1.0	1.0	1.0	0	1.0	1.0	1.0	1.0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	11	4	2	0	17	23	96	9	0	128	17	9	34	0	60	5	79	15	4	103	2	68	23	5	98	4	304	4	308	308
16:15	8	6	2	0	16	26	86	21	0	133	35	8	18	0	61	2	68	23	5	98	5	89	15	10	118	5	303	5	308	308
16:30	14	5	1	1	21	18	72	17	0	107	52	23	89	0	164	4	89	15	10	118	11	86	13	12	118	11	399	8	410	410
16:45	8	2	1	0	11	13	91	23	0	127	31	14	49	0	94	7	86	13	12	118	12	86	13	12	118	12	338	12	350	350
Total	41	17	6	1	65	80	345	70	0	495	135	54	190	0	379	18	322	66	31	437	32	322	66	31	437	32	1344	32	1376	1376
17:00	9	3	5	0	17	16	89	25	0	130	16	12	27	0	55	5	81	13	13	112	13	73	11	9	95	13	301	13	314	314
17:15	6	2	7	0	15	19	80	24	0	123	15	7	22	0	44	2	73	11	9	95	9	62	8	8	80	9	268	9	277	277
17:30	8	2	2	0	12	19	66	16	0	101	14	11	29	0	54	2	62	8	8	80	8	59	14	12	90	8	239	8	247	247
17:45	3	2	5	0	10	7	90	19	0	116	8	7	26	0	41	5	59	14	12	90	12	59	14	12	90	12	245	12	257	257
Total	26	9	19	0	54	61	325	84	0	470	53	37	104	0	194	14	275	48	42	377	42	275	48	42	377	42	1053	42	1095	1095
Grand Total	205	98	50	18	371	278	1118	182	0	1578	283	112	397	1	793	36	1071	310	127	1544	146	1071	310	127	1544	146	4140	146	4286	4286
Approch %	55.3	26.4	13.5	4.9	8.7	17.6	70.8	11.5	0.0	36.8	35.7	14.1	50.1	0.1	18.5	2.3	69.4	20.1	8.2	36.0	3.4	69.4	20.1	8.2	36.0	3.4	96.6	3.4	96.6	96.6
Total %	4.8	2.3	1.2	0.4	8.7	6.5	26.1	4.2	0.0	36.8	6.6	2.6	9.3	0.0	18.5	0.8	25.0	7.2	3.0	36.0	3.4	25.0	7.2	3.0	36.0	3.4	96.6	3.4	96.6	96.6

or Street Approaches:

Eastbound:

CSAH 11 (NORTHDALE BLVD)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9816.war

Count Type: IMC. Channel: 0. Count Date: 12/15/98

Number of Lanes: 1

Approach Speed: 45

Total Approach Traffic: 1417

Westbound:

CSAH 11 (NORTHDALE BLVD)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9816.war

Count Type: IMC. Channel: 0. Count Date: 12/15/98

Number of Lanes: 1

Approach Speed: 45

Total Approach Traffic: 1578

Minor Street Approaches:

Northbound:

XEON STREET

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9816.war

Count Type: IMC. Channel: 0. Count Date: 12/15/98

Number of Lanes: 1

Approach Speed: 0

Total Approach Traffic: 792

Southbound:

XEON STREET

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC9816.war

Count Type: IMC. Channel: 0. Count Date: 12/15/98

Number of Lanes: 1

Approach Speed: 0

Total Approach Traffic: 353

Analysis of 8-Hour Volume Warrants (Criteria refers to high volume side street for that hour):

Hour	Main Begin (Total)	Side			Warrant 1		Warrant 2		Warrant 8	
		Vol.	Dir.	Rank	Meets?	Criteria	Meets?	Criteria	Meets?	Criteria
0	0	0	S	5		105		52		84
1	0	0	S	6		105		52		84
2	0	0	S	7		105		52		84
3	0	0	S	8		105		52		84
4	0	0	S	9		105		52		84
5	0	0	S	10		105		52		84
6	0	0	S	11		105		52		84
7	769	145	S	3	--BOTH--	105	--BOTH--	52	--BOTH--	84
8	520	103	N	4	MAIN	105	SIDE	52	--BOTH--	84
9	0	0	S	12		105		52		84
10	0	0	S	13		105		52		84
11	0	0	S	14		105		52		84
12	0	0	S	15		105		52		84
13	0	0	S	16		105		52		84
14	0	0	S	17		105		52		84
15	0	0	S	18		105		52		84
16	901	379	N	1	--BOTH--	105	--BOTH--	52	--BOTH--	84
17	805	194	N	2	--BOTH--	105	--BOTH--	52	--BOTH--	84
18	0	0	S	19		105		52		84
19	0	0	S	20		105		52		84
20	0	0	S	21		105		52		84
21	0	0	S	22		105		52		84
22	0	0	S	23		105		52		84
23	0	0	S	24		105		52		84

## Warrant Summary:

Rural values apply.

## Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 3 hours. Criteria--Main St.: 350; Side St.: See Volume Summary.

## Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 3 hours. Criteria--Main St.: 525; Side St.: See Volume Summary.

## Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. Ped volumes too low. Criteria--190 Peds in peak hour, 100 peds in 4th high hour.

## Warrant 4 - School Crossing

NOT APPLICABLE. Gap data has not been defined.

## Warrant 5 - Progressive Movement

NOT SATISFIED. Adjacent signals closer than 1000 feet and/or not part of coordinated system.

## Warrant 6 - Accident Experience

NOT SATISFIED. 0 correctable accidents is fewer than required 5.

Correctable Accidents: 0; Right Angle Accidents: 0; Left Turn Accidents: 0; Other Accidents: 0.

## Warrant 7 - Systems Warrant

NOT SATISFIED. At least one street has no major approaches. Peak hour total entering volume: 1344.

- Approaches which are part of the principal through traffic roadway network.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- Approaches which appear as a major route in an official transportation plan.

## Warrant 8 - Combination of Warrants

NOT SATISFIED. Required values reached for 4 hours. Criteria--Main: 420; Side: See Volume Summary.

## Warrant 9 - Four Hour Volumes

NOT SATISFIED. Required values reached for 3 hours.

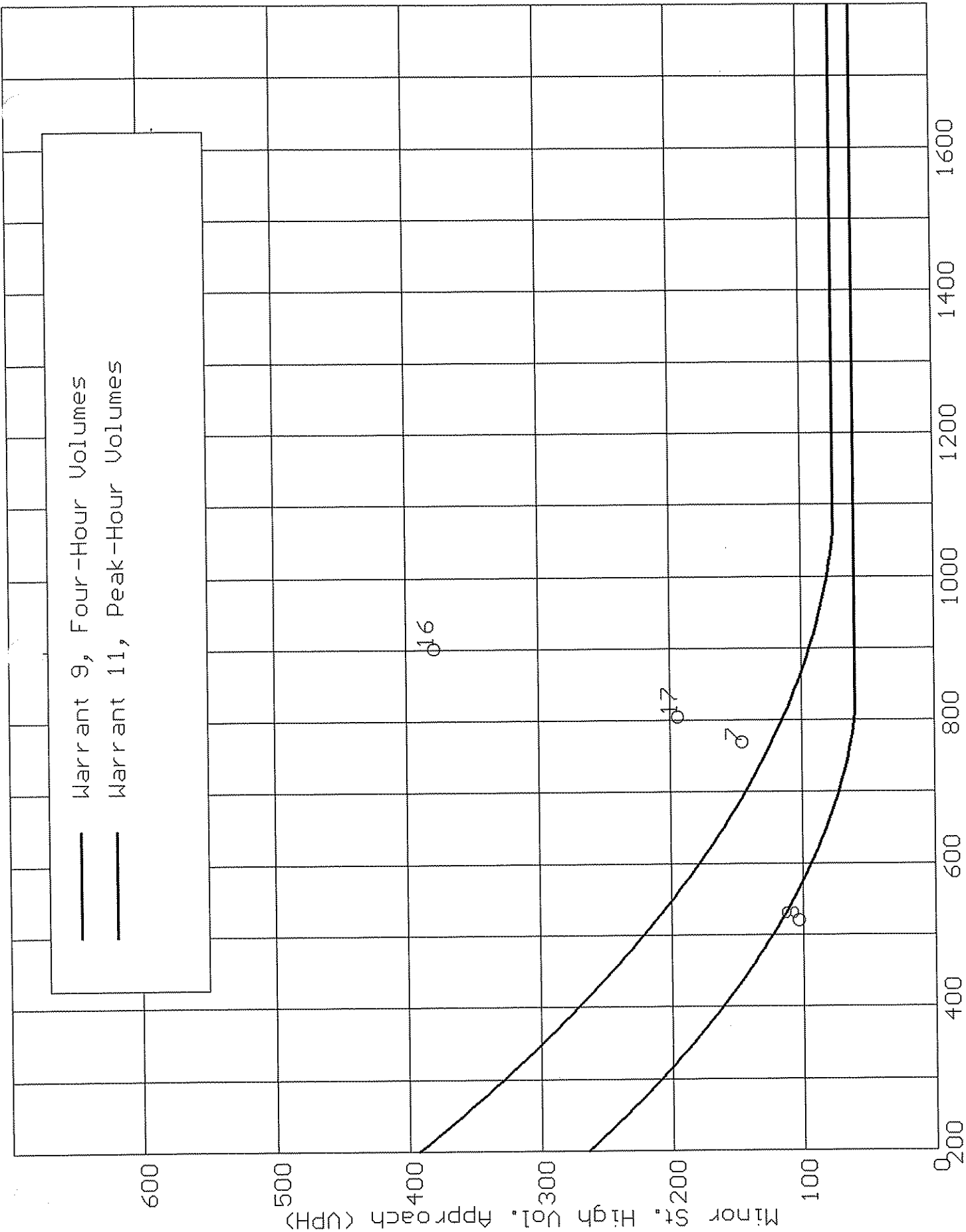
## Warrant 10 - Peak Hour Delay

NOT APPLICABLE. Volume requirements satisfied, but side street peak hour delay not defined.

Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 100.

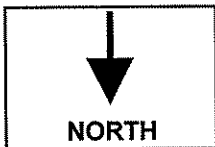
## Warrant 11 - Peak Hour Volume

SATISFIED for 3 hours.



— Warrant 9, Four-Hour Volumes  
 - - Warrant 11, Peak-Hour Volumes

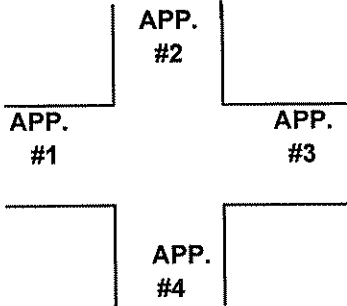
Major St. Total of Both Approaches (UPH)



COUNT LOCATION: CSAH 11 (NORTHDALE BLVD) @  
 XEON STREET

DATE: 12/15/98

APP. #1=WB CSAH 11  
 (NORTHDALE BLVD)  
 APP. #2 =NB XEON ST.  
 APP. #3=EB CSAH 11  
 (NORTHDALE BLVD)  
 APP. #4=SB XEON ST.



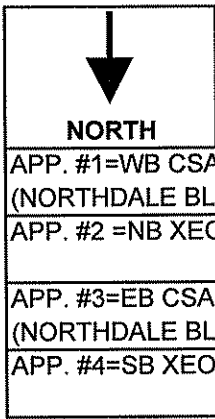
HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT

A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.

B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.

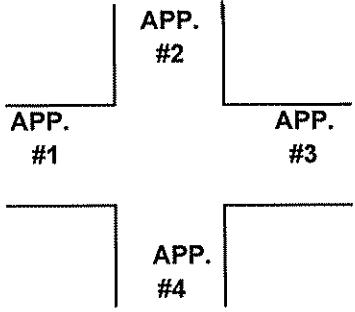
C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM								
6:15-6:30								
6:30-6:45								
6:45-7:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		
7:00-7:15						18		5
7:15-7:30						12		4
7:30-7:45						21		4
7:45-8:00						16		14
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>94</b>
8:00-8:15						14		10
8:15-8:30						13		8
8:30-8:45						14		9
8:45-9:00						10		3
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>81</b>
9:00-9:15								
9:15-9:30								
9:30-9:45								
9:45-10:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		
10:00-10:15								
10:15-10:30								
10:30-10:45								
10:45-11:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		
11:00-11:15								
11:15-11:30								
11:30-11:45								
11:45-12:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		
12:00-12:15								
12:15-12:30								
12:30-12:45								
12:45-1:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		
1:00-1:15								
1:15-1:30								
1:30-1:45								
1:45-2:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		



**COUNT LOCATION:** CSAH 11 (NORTHDALE BLVD) @  
XEON STREET

**DATE:** 12/15/98



- HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
- A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.
  - B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.
  - C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
2:00-2:15PM								
2:15-2:30								
2:30-2:45								
2:45-3:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		
3:00-3:15								
3:15-3:30								
3:30-3:45								
3:45-4:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		
4:00-4:15						7		7
4:15-4:30						15		5
4:30-4:45						14		2
4:45-5:00						14		2
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>66</b>
5:00-5:15						13		4
5:15-5:30						15		
5:30-5:45						13		1
5:45-6:00						14		2
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>62</b>
6:00-6:15								
6:15-6:30								
6:30-6:45								
6:45-7:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		
7:00-7:15								
7:15-7:30								
7:30-7:45								
7:45-8:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		
8:00-8:15								
8:15-8:30								
8:30-8:45								
8:45-9:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		
9:00-9:15								
9:15-9:30								
9:30-9:45								
9:45-10:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		